CDR Sustainment, Operations and Change Requests in IOC

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Overview

- Review Research-to-Operations process (R2O)
- Operations & Maintenance (O&M) of CDRs
- CDR Program Configuration Management
  - Change Request Process

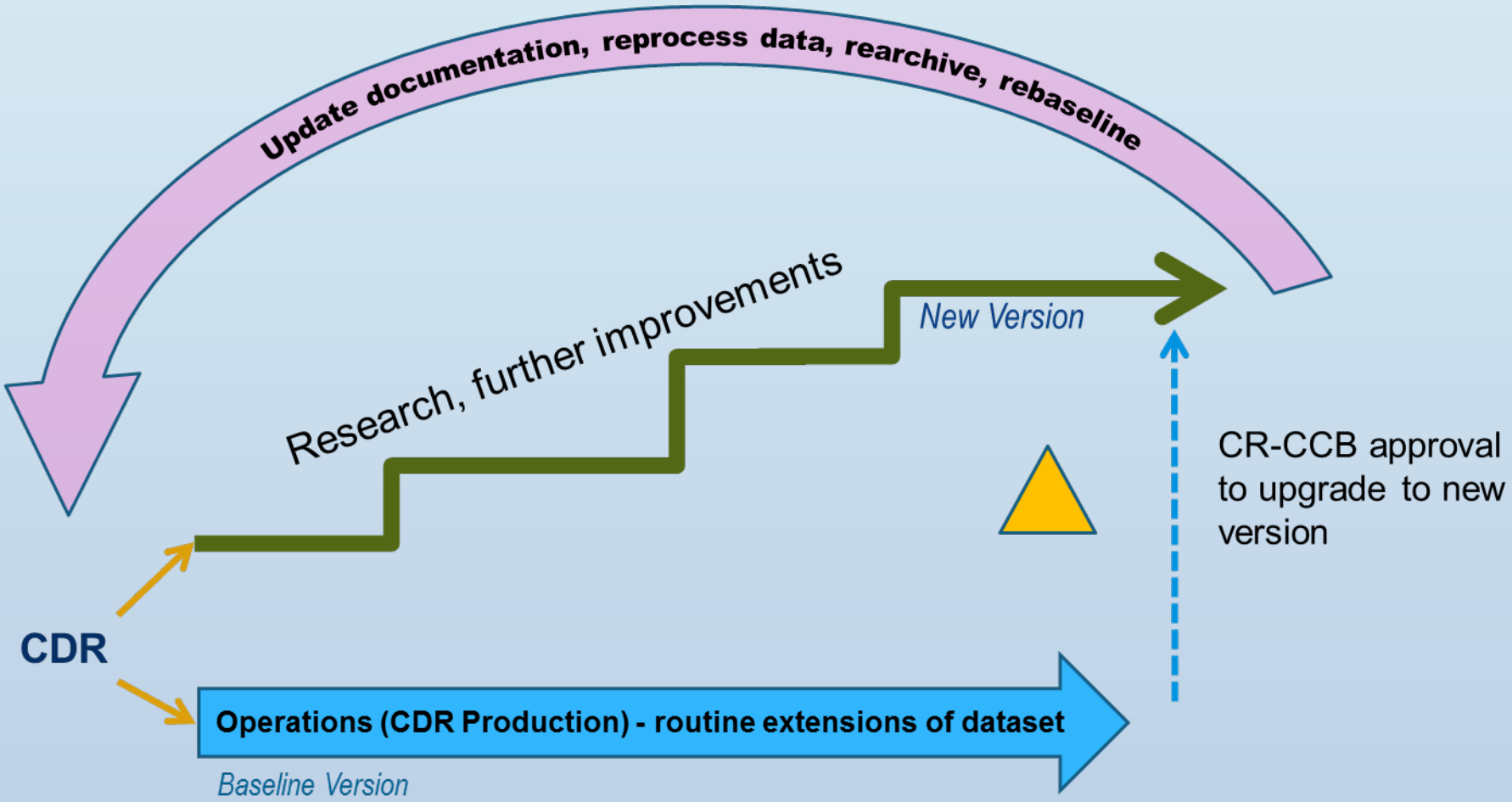
R2O Process

1) Assess
   - Assemble IPT: PI, PI Assistant, SME, PM, Ops, Archive, Access
   - Assess current data, documentation, source code; develop transition schedule
2) Prepare
   - PI Updates Source Code (CDRP coding standards, README)
   - PI Creates Documentation (C-ATBD, Flow Chart, Maturity Matrix)
   - PI Preps Data for delivery (netCDF Format, CF metadata)
3) Transfer
   - IPT creates submission agreement (PI completes Request to Archive in ATRAC)
   - PI transfers a copy of the Source Code, Documentation, and Data to NCDC
4) Verify
   - IPT verifies Source Code, Documentation , and Data
   - Iterative process until code, documentation, and data meet standards
5) Archive
   - NCDC preserves a copy of Source Code, Documentation and Data in the archive
6) Access
   - ORR, then provide public access to all items delivered via the CDR access portal

Operations & Maintenance

- CDR has attained IOC
- Implementation Plan
- Provide routine data updates (frequency is determined during the R2O process)
- Quality Assurance Procedure
- Quality Assurance Results delivered with each data update

CDR Improvements



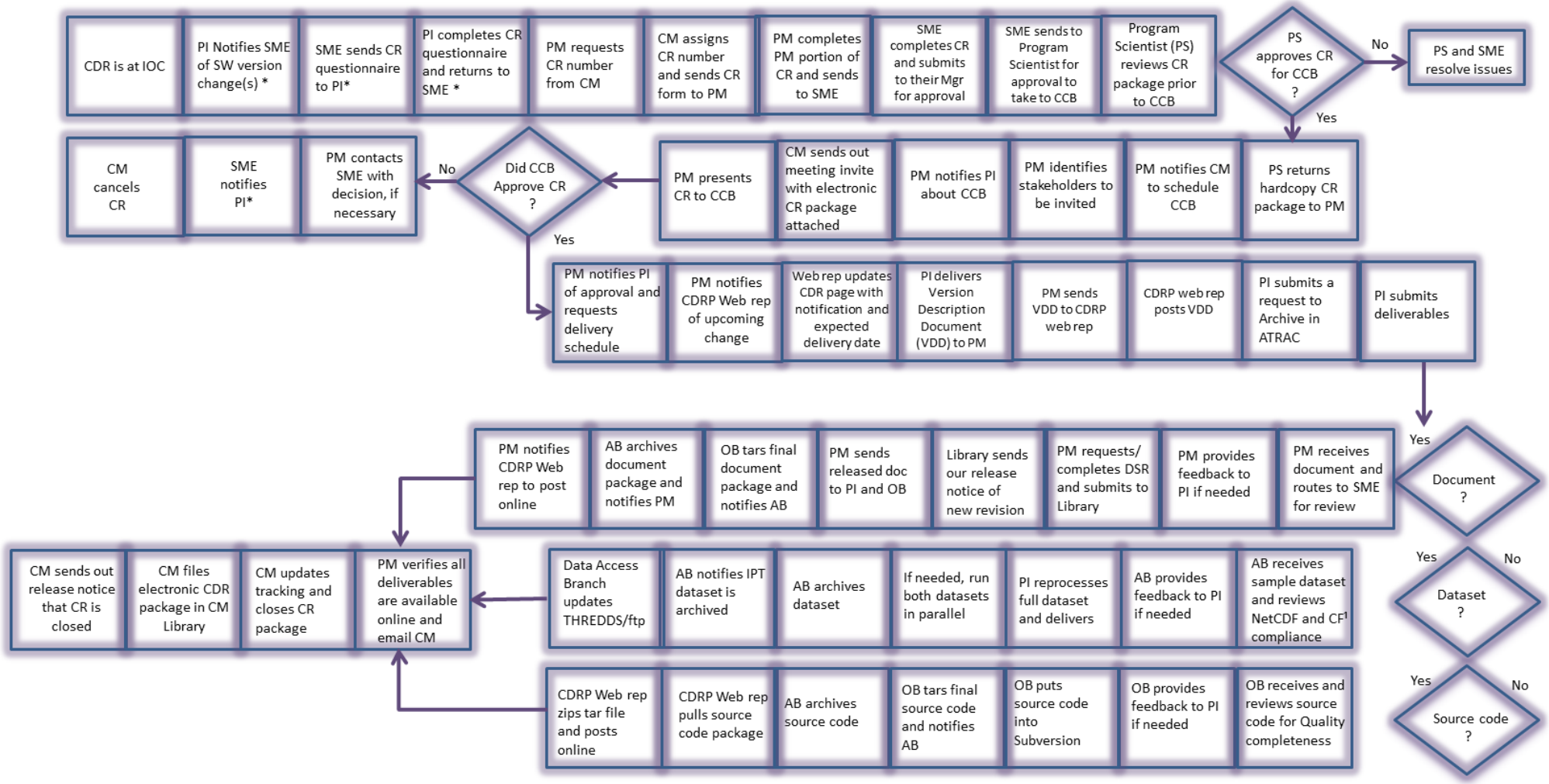
Configuration control is necessary for scientific defensibility

What happens when you submit a change?

Change Request Process

CDRP-DIA-0408 Rev 1-pending
DRAFT

O&M CHANGE REQUEST END-TO-END LIFECYCLE



[1]CF – climate and forecast convention for metadata

*cc IPT email

Change Request Process

1) The Change Request process is initialized when the PI submits a change to the CDR Program Office for any of the following:

- Documentation
- Software

2) PI completes CR Questionnaire

CDR _____ SME _____
Current Version _____ New Version _____ PM _____

CDR Change Request (CR) Questionnaire

	(Once completed, this Checklist is attached to the CR)
1	What type of change is being requested? (check one)
1a	☐ Enhancement [higher accuracy, lower uncertainty, improved CPU/Storage/Processing time economy, improved error detection/control/handling/reporting, improved automation]
1b	☐ Corrective [bug fix affecting data, non-conformance to a requirement, etc
2	Which will this change affect? (check all that apply)
2a	☐ Scientific quality (dataset)
2b	☐ Technical/Engineering quality (dataset production capability)
2c	☐ Documentation
	☐C-ATBD ☐Flow Chart ☐Maturity Matrix ☐Other
4	How will this change affect the life-cycle maintenance of the code *(if code is being changed)?*
5	What is the driver (requirement) behind this change?
6	Is this change driven by a current user requirement? ☐Yes ☐No
6a	If so, specify the requirement
7	Is this requirement new or something not performed originally? *(overlooked requirement)* ☐Yes ☐No
8	What exactly will you change? *(Attach this checksheet to the CR form)*
9	Will any of the following need to be updated? ☐Yes ☐No
	☐Source code ☐Security Review ☐README ☐Other
10	What areas of the Maturity Matrix will be improved?
11	If this is a new version, what validation and verification has been done?
12	What tools or processes can you pass along for independent V&V?
13	What are the resources required to plan and complete the proposed change?
	☐Cost ☐Time ☐Labor & skills ☐Software ☐Equipment & tools ☐Other
14	How will the change improve end user application?

CDRP-FORM-0248 Rev1
10/15/12

Change Request Process

3) O&M Project Manager and SME complete CR Form

CHANGE REQUEST (CR) — CR No.- / CR Date

1 CI IDENTIFIER: Choose an item.	2 CLASS ☐ I ☐ II ☐ Fast Track	3 PRIORITY ☐ Low ☐ Med ☐ High
4 PROJECT MANAGER (*if assigned*)	5 CHANGE TYPE: ☐ Permanent ☐ Variance	6 CATEGORY: Choose an item.
7 CR TITLE:		
8 DESCRIPTION OF CHANGE: (*what*)		
9 JUSTIFICATION FOR CHANGE: (*why*)		
10 DESCRIBE ALTERNATE OPTIONS:		
11 CR CHECKLIST INCLUDED? ☐ YES ☐ N/A	12 LIST ANY OTHER ATTACHMENTS:	
13 SUBJECT MATTER EXPERT (SME):	13a BRANCH / 13b DIVISION	13c PROGRAM/PROJECT
14 SME'S MANAGER: (*typed*)	14a SME MANAGER'S SIGNATURE: (*signed*)	

Complete Below for Class I Change

15 PROGRAM SCIENTIST CONCURRED? ☐ Yes ☐ No	15a COMMENTS:

16 AFFECTED ITEMS		ITEM ID	Current Rev	New Rev	N/A-Not Applicable	N/C – No Change
16a DOCUMENTS	Maturity Matrix	CDRP-MM-				
	C-ATBD	CDRP-ATBD-				
	Submission Agreement	AB-SA-				
	Data Flow Diagram:	CDRP-DIA-				
	Version Description Document (VDD)	CDRP-VDD-				
	Other document(s):					
16b SOFTWARE	Filename:					
16c DATASET	Name:					

16d IDENTIFY ANY OTHER RELATED CRs:	16e COMMENTS:

Schedule

17 EXPLAIN ANY IMPACTS TO SCHEDULE IF CHANGE IS/IS NOT APPROVED	
18 EXPECTED START DATE:	18a EXPECTED COMPLETION DATE:
19 APPX LABOR HOURS:	20 COMMENTS:

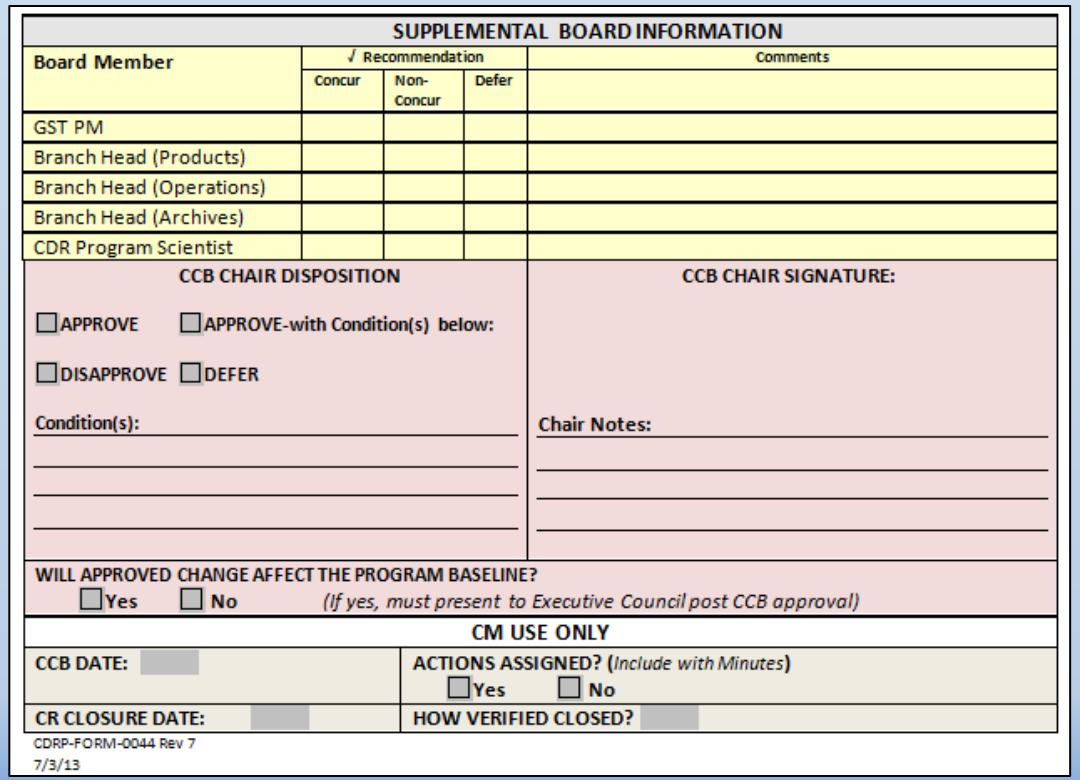
Acquisition/Procurement

21 PROCUREMENT REQUIRED? ☐ Yes ☐ No ☐ UNKNOWN	21a PURCHASE COST (if known):
22 FUNDING VEHICLE ☐ GRANT ☐ CONTRACT ☐ BOP ☐ IAA	22a VEHICLE ID#
22b COMMENTS:	

Change Request Process

4) O&M Project Manager presents the request to the Change Control Board (CCB). The PI is invited to participate in the CCB on a teleconference.

5) If CCB approves the change, the PI and IPT work to transition the updated version.



SUPPLEMENTAL BOARD INFORMATION

Board Member	√ Recommendation			Comments
	Concur	Non-Concur	Defer	
GST PM				
Branch Head (Products)				
Branch Head (Operations)				
Branch Head (Archives)				
CDR Program Scientist				

CCB CHAIR DISPOSITION

☐ APPROVE ☐ APPROVE-with Condition(s) below:

☐ DISAPPROVE ☐ DEFER

Condition(s):

CCB CHAIR SIGNATURE:

Chair Notes:

WILL APPROVED CHANGE AFFECT THE PROGRAM BASELINE?

☐ Yes ☐ No *(If yes, must present to Executive Council post CCB approval)*

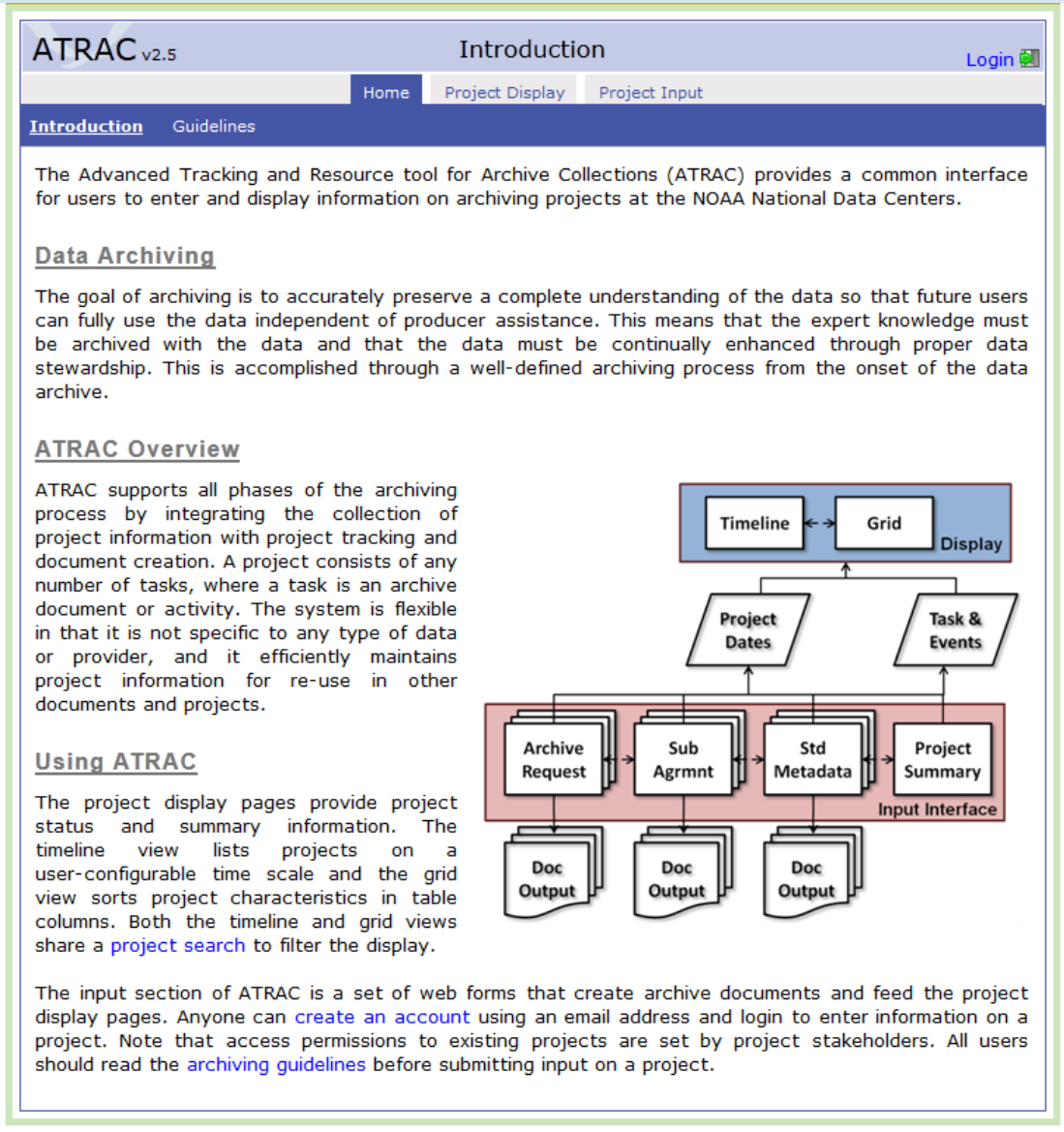
CM USE ONLY

CCB DATE:	ACTIONS ASSIGNED? (*Include with Minutes*) ☐ Yes ☐ No
CR CLOSURE DATE:	HOW VERIFIED CLOSED?

CDRP-FORM-0044 Rev 7
7/3/13

Change Request Process

6) PI submits a Request to Archive in the NCDC *Advanced Tracking and Resource Tool for Archive Collections* (ATRAC) System. (if not done previously in R2O)



Change Request Process

7) Prepare
   - PI Updates Source Code (CDRP coding standards, README)
   - PI Updates Documentation (C-ATBD, Flow Chart, Maturity Matrix)
   - PI Reprocesses Full Dataset for delivery (netCDF Format, CF metadata)
8) Transfer
   - IPT updates submission agreement
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9) Verify
   - IPT verifies Source Code, Documentation , and Data
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10) Archive
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11) Access
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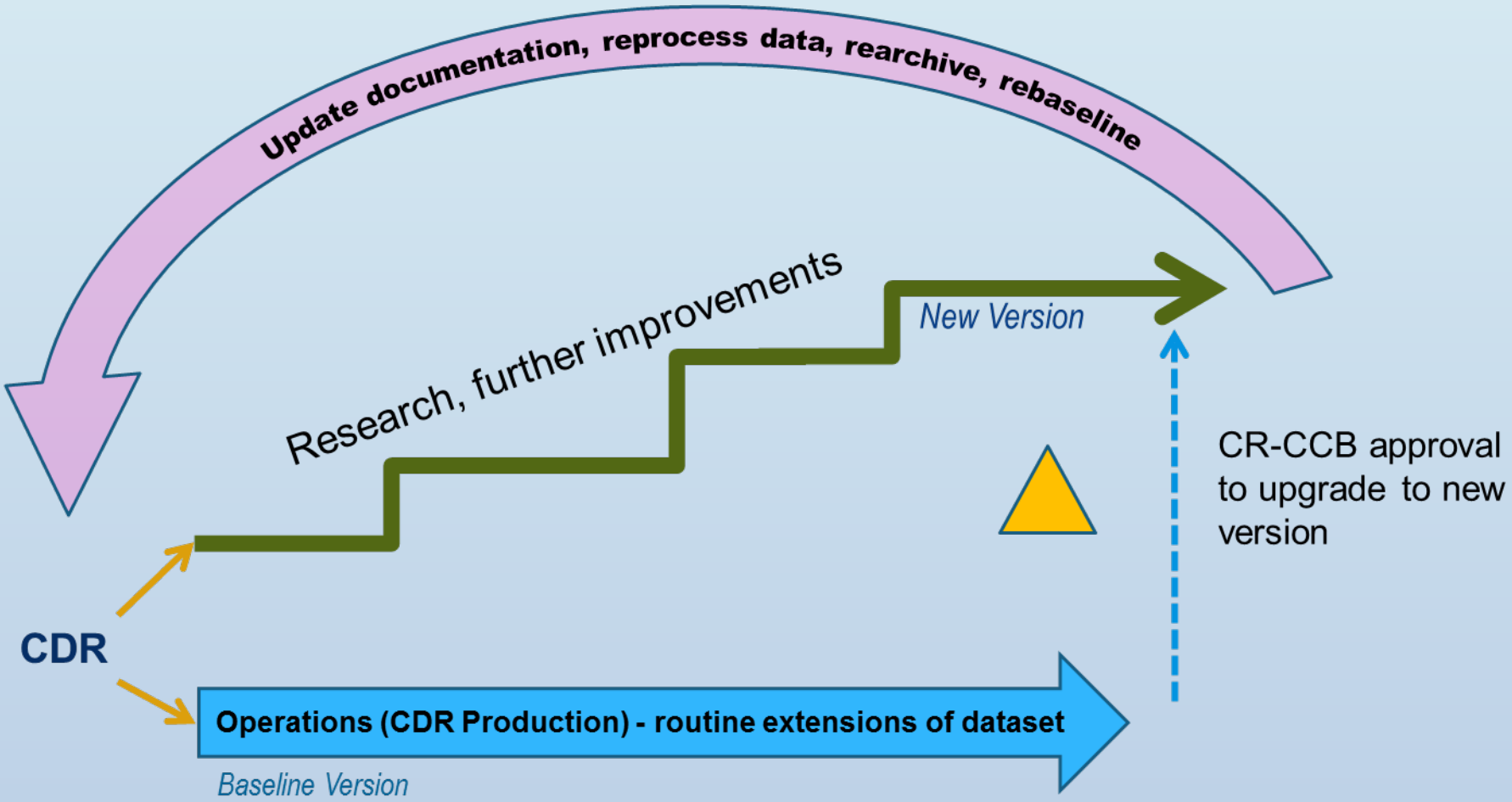
11) Continuation of previous version's data set updates
   - Allow Users time to make modifications to accept new dataset

CDR Improvements



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